6GK6

Power Pentode

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	6.3 ± 10%	volts
Current at 6.3 volts	0.76	amp

Direct Interelectrode Capacitances:[a]

Grid No.1 to plate	0.14 max.	μμf
Grid No.1 to cathode, grid No.3 & internal shield, grid No.2, and heater	10	μμf
Plate to cathode, grid No.3 & internal shield, grid No.2, and heater	7	μμf

Characteristics, Class A_1 Amplifier:

Plate Supply Voltage	250	volts
Grid-No.2 Supply Voltage	250	volts
Cathode Resistor	135	ohms
Mu-Factor, Grid No.2 to Grid No.1	19	
Plate Resistance (Approx.)	38000	ohms
Transconductance	11300	μmhos
Plate Current	48	ma
Grid-No.2 Current	5.5	ma

Mechanical:

Operating Position	Any
Maximum Overall Length	3-1/16"
Maximum Seated Length	2-13/16"
Length, Base Seat to Bulb Top (Excluding tip)	2-7/16" ± 3/32"
Diameter	0.750" to 0.875"
Dimensional Outline	See *General Section*
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW	9GK

Pin 1 - Cathode
Pin 2 - Grid No.1
Pin 3 - Grid No.3, Internal Shield
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - No Connection
Pin 7 - Plate
Pin 8 - Grid No.2
Pin 9 - Grid No.3, Internal Shield

AF POWER AMPLIFIER — Class A_1

Maximum Ratings, *Design-Maximum Values:*

PLATE SUPPLY VOLTAGE	600 max.	volts
PLATE VOLTAGE	330 max.	volts
GRID-No.2 SUPPLY VOLTAGE	600 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	330 max.	volts

GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Negative-bias value	100 max.	volts
CATHODE CURRENT	65 max.	ma
GRID-No.2 INPUT:		
Peak	4 max.	watts
Average	2 max.	watts
PLATE DISSIPATION	13.2 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	100 max.	volts
Heater positive with respect to cathode	100 max.	volts

Typical Operation:

Plate Supply Voltage	250	volts
Grid-No.2 Supply Voltage	250	volts
Cathode Resistor	135	ohms
Peak AF Grid-No.1 Voltage	7.3	volts
Zero-Signal Plate Current	48	ma
Max.-Signal Plate Current	50.6	ma
Zero-Signal Grid-No.2 Current	5.5	ma
Max.-Signal Grid-No.2 Current	10	ma
Effective Load Resistance	5200	ohms
Total Harmonic Distortion	10	%
Max.-Signal Power Output	5.7	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.3 max.	megohm
For cathode-bias operation	1 max.	megohm

PUSH-PULL AF POWER AMPLIFIER — Class AB_1

Maximum Ratings, *Design-Maximum Values:*

PLATE SUPPLY VOLTAGE	600 max.	volts
PLATE VOLTAGE	330 max.	volts
GRID-No.2 SUPPLY VOLTAGE	600 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	330 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Negative-bias value	100 max.	volts
CATHODE CURRENT	65 max.	ma
GRID-No.2 INPUT:		
Peak	4 max.	watts
Average	2 max.	watts
PLATE DISSIPATION	13.2 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	100 max.	volts
Heater positive with respect to cathode	100 max.	volts

Typical Operation:

Values are for 2 tubes

Plate Supply Voltage	250	300	volts
Grid-No.2 Supply Voltage	250	300	volts
Cathode Resistor	130	130	ohms
Peak AF Grid-No.1-to-Grid-No.1 Voltage	22.4	28	volts
Zero-Signal Plate Current	62	72	ma

Max.-Signal Plate Current	75	92	ma
Zero-Signal Grid-No.2 Current	7	8	ma
Max.-Signal Grid-No.2 Current	15	22	ma
Effective Load Resistance (Plate to plate)	8000	8000	ohms
Total Harmonic Distortion	3	4	%
Max.-Signal Power Output	11	17	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.3 max.	megohm
For cathode-bias operation	1 max.	megohm

PUSH-PULL AF POWER AMPLIFIER — Class B

Maximum Ratings, *Design-Maximum Values:*

PLATE SUPPLY VOLTAGE	600 max.	volts
PLATE VOLTAGE	330 max.	volts
GRID-No.2 SUPPLY VOLTAGE	600 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	330 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Negative-bias value	100 max.	volts
CATHODE CURRENT	65 max.	ma
GRID-No.2 INPUT:		
Peak	4 max.	watts
Average	2 max.	watts
PLATE DISSIPATION	13.2 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	100 max.	volts
Heater positive with respect to cathode	100 max.	volts

Typical Operation:

Values are for 2 tubes

Plate Voltage	250	300	volts
Grid-No.2 Voltage	250	300	volts
Grid-No.1 Voltage	-11.6	-14.7	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage	22.4	28	volts
Zero-Signal Plate Current	20	15	ma
Max.-Signal Plate Current	75	92	ma
Zero-Signal Grid-No.2 Current	2.2	1.6	ma
Max.-Signal Grid-No.2 Current	15	22	ma
Effective Load Resistance (Plate to plate)	8000	8000	ohms
Total Harmonic Distortion	3	4	%
Max.-Signal Power Output	11	17	watts

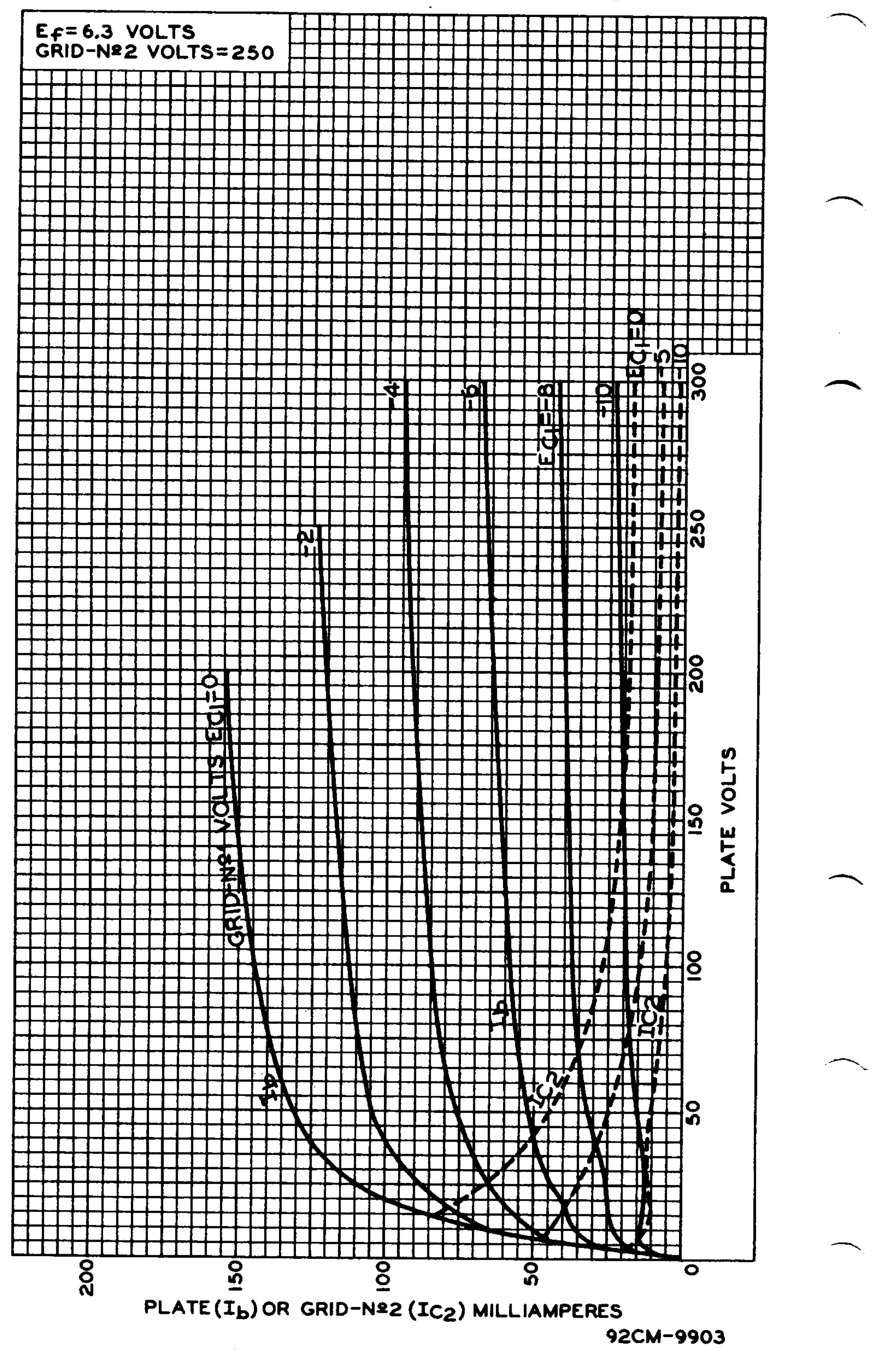
Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.3 max.	megohm
For cathode-bias operation	1 max.	megohm

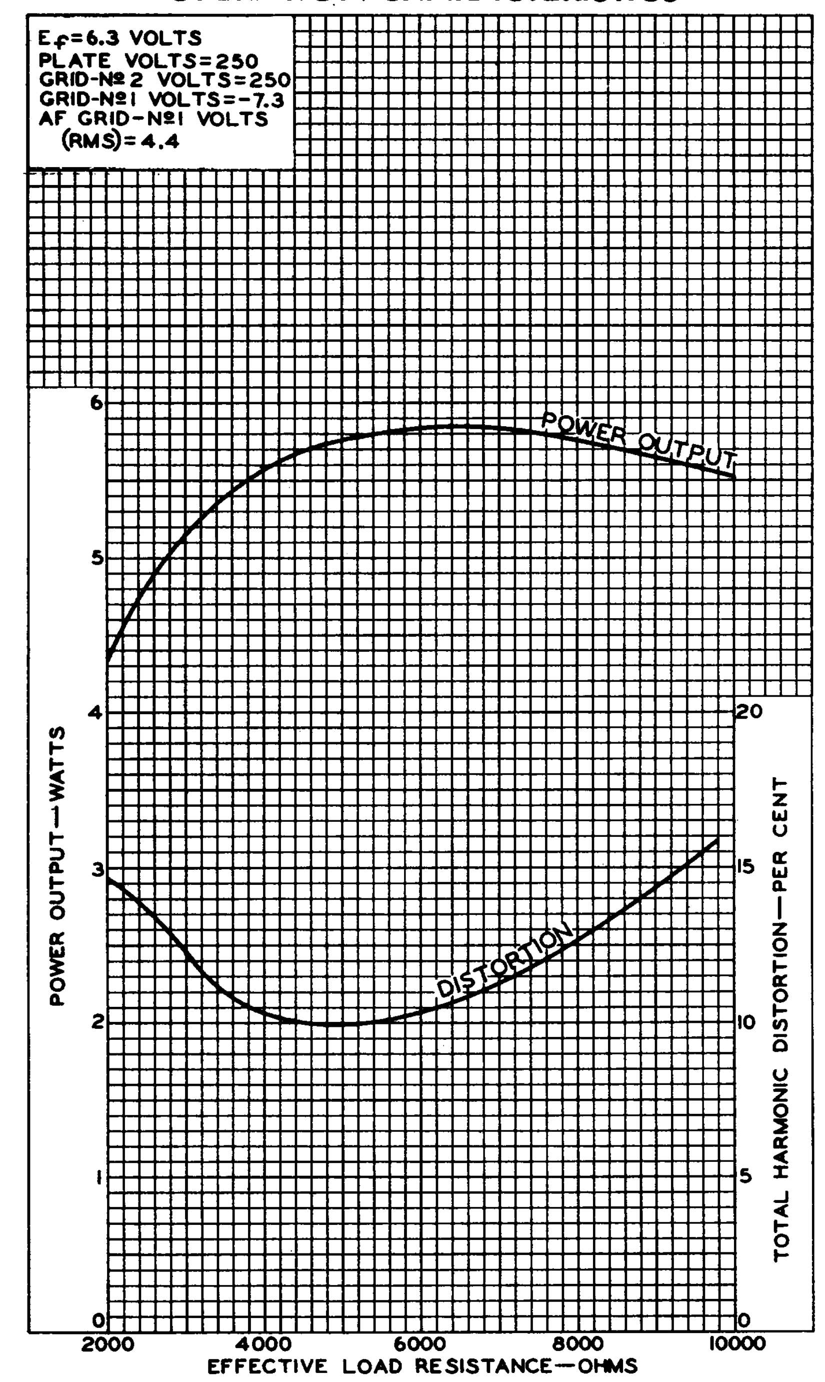
[a] Without external shield.

6GK6

AVERAGE CHARACTERISTICS



OPERATION CHARACTERISTICS



92CM-9902